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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,827	12/02/2003	Akira Ichihashi	524941/0020	5536

7590 12/22/2005

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EXAMINER

VO, ANH T N

ART UNIT	PAPER NUMBER
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2861

DATE MAILED: 12/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/726,827

Applicant(s)

ICHIHASHI ET AL.

Examiner

Anh T.N. Vo

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 1-3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 4-6 is/are rejected.
- 7) ☐ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/02/2003</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Election /Restriction

A telephone conversation between Examiner, Tai V. Nguyen, and Mr. David L. Schaeffer on 11/16/2005 a provisional election was made without traverse to prosecute the invention of Group II, claims 4-7. Applicant in replying to this Office action must make affirmation of this election. Claims 1-3 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The references cited on PTO 1449 have been considered.

Specification

The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2861

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-6 are rejected under 35 USC 103 (a) as being unpatentable over Shinada et al (US 6,634,738).

Shinada et al. disclose in Figures 1A-1B and 4-6 an ink cartridge for using in an ink jet printing apparatus comprising:

- a liquid accommodating chamber (60) for containing a liquid;
 - a hollow part (4) having a liquid supplying opening, into which a liquid supplying needle (52) of a liquid ejecting apparatus (50) is inserted, while said liquid supplying opening communicating with said liquid accommodating chamber (60);
 - a seal member (61) contained in said hollow part (4), said seal member (61) having an insertion opening (a hole, see column 7, lines 43-45) being in elastic contact with an external circumference of said liquid supplying needle (52), while said liquid supplying needle is inserted to said insertion opening (Figures 4-5, column 7, lines 41-45);
 - a supply valve (65) contained in said hollow part (4), said supply valve arranged in order to close or open said insertion opening of said seal member (61) (Figures 4-5, column 7, lines 50-62);
 - an urging member (64) for urging said supply valve (65) toward said seal member (61), wherein said supply valve (65) comprises: a body part having a circular cross-section (a circular cross-section of a valve body 65 at its bottom close by an element 63), of which a diameter is substantially the same as a diameter of said hollow part of said liquid supplying part (a liquid supply part that contains elements 64, 65);
 - a bottom face (a bottom part of an element 65) formed at a second end of said body part (65), said bottom face having a flat surface being in contact with said seal member (61) (Figure 5);
- and

- wherein a diameter of said body part of said supply valve (a diameter of valve body 65 at a bottom) is larger than a diameter of said liquid supplying needle (52) inserted from said liquid supplying opening to allow said supply valve (65) to slide in said hollow part (4) (Figure 4.

However, Shinada et al. disclose the claimed invention except for “a body part of a supply valve having a cylindrical shape, of which a height is higher than said diameter of said hollow part of said liquid supplying part; a taper part formed at a first end of said body part, said taper part having an end engaged with said urging member and a distance between a taper part of a valve body of a supply valve that is engaged with a first end of a coil spring of a urging member in a hollow part of a liquid supplying part and a spring seat for preventing a second end of the coil spring from moving in the hollow part is longer than a height of the body part of the supply valve, when a bottom face of said supply valve is in contact with said seal member”. It would have been obvious to one having ordinary skill in the art at the time the invention was made to select changes in the shape of the body part of the supply valve such as square shape or sphere shape or cylindrical shape and the distance between a taper part of a valve body of a supply valve that is engaged with a first end of a coil spring of a urging member in a hollow part of a liquid supplying part and a spring seat for preventing a second end of the coil spring from moving in the hollow part is longer than a height of the body part of the supply valve, when a bottom face of said supply valve is in contact with said seal member for the purpose of sealing and opening an hole of an ink supply port, since it is a mechanical design expedient for an engineer depending upon a particular environment and the applications in which the ink jet cartridge is to be used.

Citation of Pertinent Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. These prior art references (US Pat. 5,721,576; US Pat. 5,781,213; US Pat. 6,186,620, US Pat. 6,612, 689) cited in the PTO 892 form show an ink cartridge which is deemed to be relevant to the present invention. These references should be reviewed.

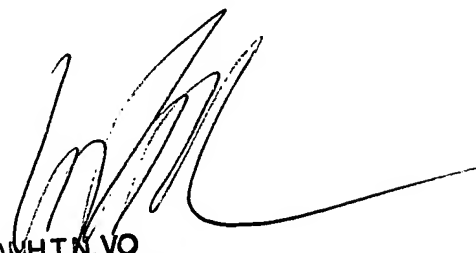
Allowable Subject Matter

Claim 7 is allowable if rewritten to include all of the limitations of the base claim and any intervening claims. This claim would be allowable because none of the prior art references of record discloses a liquid cartridge comprising a supply valve that has a concave part for accepting a coil spring of an urging member to urge the supply valve in the combination as claimed.

CONCLUSION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Anh Vo, whose telephone number is (571) 272-2262.

The fax number of this Group 2800 is (571) 273-8300.


ANH T. N. VO
PRIMARY EXAMINER
December 15, 2005